

**What is claimed is:**

1           ~~1.~~       A virtual biological fluid system for secure  
2       communications, said system comprising:  
3                   a primary gateway having security information;  
4                   a plurality of communication layers, and  
5                   a security control plane formed using information from said  
6       plurality of communications layers, whereby said security control plane in  
7       conjunction with said security information forms a virtual biological fluid  
8       insuring secure data transmission.

1                   2.       The system as recited in claim 1, further comprising:  
2                   at least one station in communication with said primary gateway;  
3       and  
4                   a satellite in orbit and in communication with said primary  
5       gateway and said at least one station, and said security control plane is on board  
6       said satellite.

1                   3.       The system as recited in claim 2, wherein at least one of  
2       said plurality of communication layers is an application layer.

1                   4.       The system as recited in claim 2, wherein at least one of  
2       said plurality of communication layers is a presentation layer.

1                   5.       The system as recited in claim 2, wherein at least one of  
2       said plurality of communication layers is a session layer.

1                   6.       The system as recited in claim 2, wherein at least one of  
2       said plurality of communication layers is a transport layer.

1                   7.     The system as recited in claim 2, wherein at least one of  
2     plurality of communication layers is a network layer.

1                   8     The system as recited in claim 2, wherein at least one of  
2     said plurality of communication layers is a data link layer.

1                   9.     The system as recited in claim 2, wherein at least one of  
2     said plurality of communication layers is a physical layer.

1                   10.    A method for secure communications over a network,  
2     said method comprising the steps of:  
3                   generating security data;  
4                   forming a security control plane using information from a  
5     plurality of communications layers;  
6                   forming a virtual biological fluid using said security control  
7     plane in conjunction with said security data, whereby secure data transmission  
8     between a ground gateway and a station may occur; and  
9                   communicating secure data between said ground gateway and  
10    said station.